

WHAT IS CLAIMED IS:

1. A deployable antenna reflector, comprising:
a central dish fixedly mounted on a central supporting body;
a plurality of deployable sheet-like panels hinged to said central supporting body and arranged around the central dish;
wherein the rotation axes of each of individual ones of said deployable sheet-like panels are tilted with respect to a center point of the central dish, and
wherein, in a stowed configuration of the reflector, the deployable sheet-like panels are at least partially deflected in order to minimize an envelope of the reflector and the panels relax upon entering a deployment configuration.
2. The deployable antenna reflector according to claim 1, wherein each of said sheet-like panels is supported by a rib which connects said each sheet-like panel to the central supporting body via mechanical bushings.
3. The deployable antenna reflector according to claim 1, wherein each sheet-like panel includes a torque spring acting on the rotation axis thereby driving the sheet-like panels from the stowed configuration into the deployed configuration.
4. The deployable antenna reflector according to claim 1, wherein brackets are mounted at the outer end of each sheet-like panel forming a closed formlocking structural ring in the stowed configuration of the reflector.

5. The deployable antenna reflector according to claim 4, wherein, in the stowed configuration of the reflector, the structural ring is loaded by a circumferential rope allowing to compress the individual brackets with respect to each other.

6. The deployable antenna reflector according to claim 1, wherein a damping device is mounted on one of the sheet-like panels in order to simultaneously damp the motion of the sheet-like panels during deployment.

7. The deployable antenna reflector according to claim 6, wherein the damping device cooperates with a cable drum on which a damping rope is wound said damping rope being guided around the formlocking ring in the stowed configuration.

8. The deployable antenna reflector according to claim 1, wherein the central supporting body is a hollow ring made of carbon fiber reinforced plastic.

9. The deployable antenna reflector according to claim 1, wherein the deployable sheet-like panels are made of carbon fiber reinforced plastic.

10. The deployable antenna reflector according to claim 2, wherein each sheet-like panel includes a torque spring acting on the rotation axis thereby driving the sheet-like panels from the stowed configuration into the deployed configuration.

11. The deployable antenna reflector according to claim 2, wherein brackets are mounted at the outer end of each sheet-like panel forming a closed formlocking structural ring in the stowed configuration of the reflector.

12. The deployable antenna reflector according to claim 3, wherein brackets are mounted at the outer end of each sheet-like panel forming a closed formlocking structural ring in the stowed configuration of the reflector.

13. The deployable antenna reflector according to claim 2, wherein a damping device is mounted on one of the sheet-like panels in order to simultaneously damp the motion of the sheet-like panels during deployment.

14. The deployable antenna reflector according to claim 3, wherein a damping device is mounted on one of the sheet-like panels in order to simultaneously damp the motion of the sheet-like panels during deployment.

15. The deployable antenna reflector according to claim 4, wherein a damping device is mounted on one of the sheet-like panels in order to simultaneously damp the motion of the sheet-like panels during deployment.

16. The deployable antenna reflector according to claim 2, wherein the central supporting body is a hollow ring made of carbon fiber reinforced plastic.

17. The deployable antenna reflector according to claim 3, wherein the central supporting body is a hollow ring made of carbon fiber reinforced plastic.

18. The deployable antenna reflector according to claim 4, wherein the central supporting body is a hollow ring made of carbon fiber reinforced plastic.

19. The deployable antenna reflector according to claim 2, wherein the deployable sheet-like panels are made of carbon fiber reinforced plastic.

20. The deployable antenna reflector according to claim 3, wherein the deployable sheet-like panels are made of carbon fiber reinforced plastic.